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1. A method for modulating a disease or condition associated with phospholipase D (PLD) initiated polymorphoneutrophil (PMN) inflammation in a subject, comprising

administering to the subject an effective anti-inflammatory amount of a lipoxin analog having the formula

$$Q_4H$$
 $Q_3H$ 
 $Q_3H$ 
 $Q_1$ 
 $Q_1$ 
 $Q_2$ 
 $Q_3$ 
 $Q_4$ 
 $Q$ 

wherein X is  $R_1$ ,  $QR_1$ , or  $SR_1$ ;

(iv)

wherein  $R_1$  is

i) a hydrogen atom;

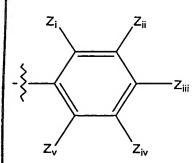
be straight chain or branched;

(iii) a cycloalkyl of 3 to 10 carbon atoms;

an aralkyl of 7 to 12 carbon atoms;

(v) phenyl;

(vi) substituted phenyl



wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from -NO<sub>2</sub>, -CN,

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 $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl;

- a detectable label molecule; or (vii)
- (viii) a straight or/branched chain alkenyl of 2 to 8 carbon atoms, inclusive;

wherein  $Q_1$  is (C=0),  $SO_2$  or (CN), provided when  $Q_1$  is CN, then X is absent; wherein  $Q_3$  and  $Q_4$  are each independently O, S or NH; wherein one of R<sub>2</sub> and R<sub>3</sub> is a hydrogen atom and the other is

- (a) H;
- (b) an alky of 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched;
- a cycloalkyl of 3 to 6 carbon atoms, inclusive; (c)
- an alkeny of 2 to 8 carbon atoms, inclusive, which may be straight (d) chain of branched; of
- (e)  $R_a Q_2 R_b$  wherein  $Q_2$  is -O- or -S-; wherein  $R_a$  is alkylene of 0 to 6 carbons atoms, inclusive, which may be straight chain or branched and wherein R<sub>b</sub> is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a hydrogen atom;

wherein R<sub>4</sub> is

- (a) H;
- an alkyl of 1 to 6 carbon atoms, inclusive, which may be a straight (b) chain or branched;

wherein R<sub>5</sub> is

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wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and

wherein  $Y_1$  is OH methyl.—SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or  $CH_aZ_b$  where a+b=3, a=0 to 3, b=0 to 3 and Z is cyano, nitro or a halogen;

hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein R<sub>6</sub> is

- (a) H
- (b) an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched;

wherein T is O or S, and pharmaceutically acceptable salts thereof, such that a disease or condition associated with PLD initiated polymorphoneutrophil (PMN) inflammation in a subject is modulated.

- 2. The method of claim 1, wherein said method is performed in vitro.
- 3. The method of claim 1, wherein said method is performed in vivo.

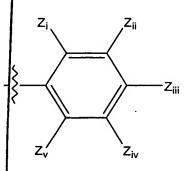
4. A method for treating phospholipase D (PLD) initiated polymorphoneutrophil (PMN) inflammation in a subject, comprising

administering to the subject an effective anti-inflammatory amount of a lipoxin analog having the formula

 $Q_4H$   $Q_3H$   $R_2$   $Q_1$   $R_4$   $R_5$   $R_3$   $R_6$   $R_1$   $R_5$   $R_7$ 

wherein X is  $R_1$ ,  $OR_1$ , or  $SR_1$ ; wherein  $R_1$  is

- (i) a hydrogen atom;
- (ii) an alkyl of 1 to 8 carbons atoms, inclusive, which may be straight chain or branched;
- (iii) a cysloalkyl of 3 to 10 carbon atoms;
- (iv) an analkyl of 7 to 12 carbon atoms;
- (v) phenyl;
- (vi) substituted phenyl



wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to

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8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl; a detectable label molecule; or (vii) (viii) a straight or branched chain alkenyl of 2 to 8 carbon

atoms, inclusive;

wherein  $Q_1$  is (C=0),  $SO_2$  or (CN), provided when  $Q_1$  is CN, then X is absent; wherein Q<sub>3</sub> and Q<sub>4</sub> are each independently O, S or NH; wherein one of R<sub>2</sub> and R<sub>3</sub> is a hydrogen atom and the other is

- H; (a)
- an alkyl of 1 to \$\forall carbon atoms, inclusive, which may be a straight (b) chain or branched;
- (c) a cycloalkyl of 3 to 6 carbon atoms, inclusive;
- (d) an alkenyl of 2 to 8 darbon atoms, inclusive, which may be straight chain or branched; or
- $R_aQ_2R_b$  wherein  $Q_2$  is -O- or -S-; wherein  $R_a$  is alkylene of 0 to 6 (e) carbons atoms, inclusive, which may be straight chain or branched and wherein R, is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a hydrogen atom;

wherein R<sub>4</sub> is

- (a) H;
- (b) an alkyl of 1 to 6 carbon atoms, inclusive, which may be a straight chain or branched;

wherein R<sub>5</sub> is

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wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein  $Y_1$  is -OH, methyl, -SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or  $CH_aZ_b$  where a+b=3, a=0 to 3, b=0 to 3 and Z is cyano, nitro or a halogen;

wherein R<sub>6</sub> is

- (a) H;
- (b) an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched;

wherein T is O or S and pharmaceutically acceptable salts thereof, such that PLD initiated polymorphoneutrophil (PMN) inflammation is treated in a subject.

- 5. The method of claim 1, wherein said method is performed in vitro.
- 6. The method of claim 1, wherein said method is performed in vivo.

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7. A method for modulating a disease or condition associated with phosphlipase D (PLD) initiated superoxide generation or degranulation activity in a subject, comprising

administering to the subject an effective anti-PLD amount of a lipoxin analog having the formula

$$Q_4H$$
 $Q_3H$ 
 $Q_3H$ 
 $Q_3H$ 
 $Q_1$ 
 $Q_1$ 
 $Q_1$ 
 $Q_2$ 
 $Q_3$ 
 $Q_4$ 
 $Q_5$ 
 $Q_5$ 

wherein X is  $R_1$ ,  $OR_1$ , or  $SR_1$ ;

wherein  $R_1$  is

(i) a hydrogen atom;

(ii) an alkyl of 1 to 8 carbons atoms, inclusive, which may

be straight chain or branched;

(iii) / a cycloalkyl of 3 to 10 carbon atoms;

(iv) an aralkyl of 7 to 12 carbon atoms;

(v) phenyl;

(vi) | substituted phenyl

$$Z_{i}$$
 $Z_{ii}$ 
 $Z_{ii}$ 

wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from -NO<sub>2</sub>, -CN,

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 $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl;

(vii) a detectable label molecule; or

(viii) a straight or branched chain alkenyl of 2 to 8 carbon atoms, inclusive;

wherein  $Q_1$  is (C=0),  $SO_2$  or (CN), provided when  $Q_1$  is CN, then X is absent; wherein  $Q_3$  and  $Q_4$  are each independently O, S or NH; wherein one of  $R_2$  and  $R_3$  is a hydrogen atom and the other is

- (a) H;
- (b) an alkyl of 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched;
- (c) a cycloalkyl of 3 to 6 carbon atoms, inclusive;
- (d) an alkenyl of 2 to 8 carbon atoms, inclusive, which may be straight chain or branched; or
- (e) R<sub>a</sub>Q<sub>2</sub>R<sub>b</sub> wherein Q<sub>2</sub> is O- or S-; wherein R<sub>a</sub> is alkylene of 0 to 6 carbons atoms, inclusive, which may be straight chain or branched and wherein R<sub>b</sub> is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a hydrogen atom;

wherein R<sub>4</sub> is

- (a) H;
- (b) an alkyl of to 6 carbon atoms, inclusive, which may be a straight chain or branched;

wherein R<sub>5</sub> is

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wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from -NO<sub>2</sub>, -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydfogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein  $Y_1$  is -OH, methyl, -SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or CH<sub>a</sub>Z<sub>b</sub> where a+b=3, a=0 to  $\beta$ , b=0 to 3 and Z is cyano, nitro or a halogen;

wherein R<sub>6</sub> is

(a)

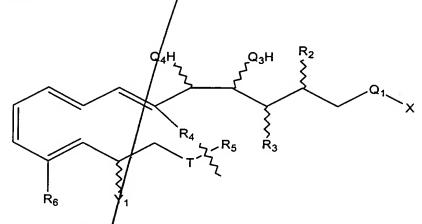
(b) an alky from 1 to 4 carbon atoms, inclusive, straight chain or branched;

wherein T is O or A, and pharmaceutically acceptable salts thereof, such that a disease or condition associated with PLD initiated superoxide generation or degranulation activity in a subject is phodulated.

- 8. The method of claim 7, wherein said method is performed in vitro.
- 9. The method of claim 7, wherein said method is performed in vivo.

10. A method for treating phospholipase D (PLD) initiated superoxide generation or degranulation in a subject, comprising

administering to the subject an effective anti-PLD amount of a lipoxin analog having the formula



wherein X is  $R_1$ ,  $OR_1$ , or  $SR_1$ ;

(ii)

wherein  $R_1$  is

(i) a hydrogen atom;

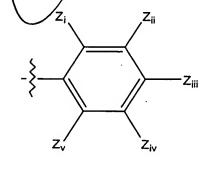
an alkyl of 1 to 8 carbons atoms, inclusive, which may be straight chain or branched;

a cycloalkyl of 3 to 10 carbon atoms;

an aralkyl of 7 to 12 carbon atoms;

phenyl;

substituted phenyl



wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from -NO<sub>2</sub>, -CN, -C(=O)  $R_1$ , -SO<sub>3</sub>H, a hydrogen atom, halogen, methyl, -OR<sub>x</sub>, wherein  $R_x$  is 1 to

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8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl; a detectable label molecule; or (vii)

(viii) a straight or branched chain alkenyl of 2 to 8 carbon atoms,/inclusive;

wherein  $Q_1$  is (C=0),  $SO_2$  or (CN), provided when  $Q_1$  is CN, then X is absent; wherein Q<sub>3</sub> and Q<sub>4</sub> are each independently O, S or NH; wherein one of R<sub>2</sub> and R<sub>3</sub> is A hydrogen atom and the other is

(a) H;

(b) an alkyl of 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched;

(c) a cycloalkyl of 3 to 6 carbon atoms, inclusive;

an alkenyl of 2 to 8 carbon atoms, inclusive, which may be straight (d) chain or branched; or

(e)  $R_a Q_2 R_b$  wherein  $Q_2$  is -O or -S; wherein  $R_a$  is alkylene of 0 to 6 carbons atoms, inclusive, which may be straight chain or branched and wherein R<sub>b</sub> is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a/hydrogen atom/

wherein R<sub>4</sub> is

H; (a)

(b) an alkyl of 1 to 6 carbon atoms, inclusive, which may be a straight chain or branched;

wherein R<sub>5</sub> is

wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein  $Y_1$  is -OH, methyl, -SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or  $CH_aZ_b$  where a+b=3, a=0 to 3, b=0 to 3 and Z is cyano, nitro or a halogen;

wherein R<sub>6</sub> is

(a) H;

(b) an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched;

wherein T is O or S, and pharmaceutically acceptable salts thereof, such that PLD initiated superoxide generation or granulation is treated in a subject.

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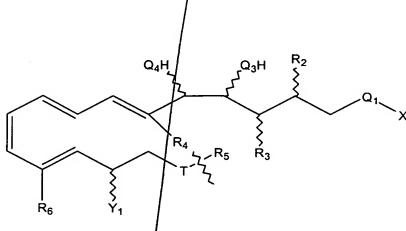
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- 11. The method of claim 10, wherein said method is performed in vitro.
- 12. The method of claim 10, wherein said method is performed in vivo.

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13. A packaged pharmaceutical composition for treating a disease or condition associated with phospholipase D (PLD) initiated activity in a subject, comprising:

a container holding a therapeutically/effective amount of at least one lipoxin compound having the formula



wherein X is R<sub>1</sub>, OR<sub>1</sub>, or SR<sub>1</sub>

wherein R<sub>1</sub> is

(i) a Hydrogen atom;

(ii) an alkyl of 1 to 8 carbons atoms, inclusive, which may

be straight chain or branched;

a cycloalkyl of 3 to 10 carbon atoms;

an aralkyl of 7 to/12 carbon atoms;

phenyl; (vi) substituted phenyl

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 $Z_{iii}$ 

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wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and

hydroxyl;

(vii) a detectable label molecule; or

(viii) a straight or/branched chain alkenyl of 2 to 8 carbon atoms, inclusive;

wherein  $Q_1$  is (C=0),  $SO_2$  or (CN) provided when  $Q_1$  is CN, then X is absent; wherein  $Q_3$  and  $Q_4$  are each independently O, S or NH; wherein one of R<sub>2</sub> and R<sub>3</sub> is a hydrogen atom and the other is

- (a) H;
- an alkyl of 1 to 8 carbon atoms, inclusive, which may be a straight (b) chain or branched:
- (c) a cycloalkyl of 3 to 6 carbon atoms, inclusive;
- (d) an alkenyl of 2 to 8 carbon atoms, inclusive, which may be straight chain or branched; or
- $R_aQ_2R_b$  wherein  $Q_2$  is -O- or -S-; wherein  $R_a$  is alkylene of 0 to 6 (e) carbons atoms, inclusive, which may be straight chain or branched and wherein R is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a hydrogen atom,

wherein R<sub>4</sub> is

- (a) H;
- (b) an alkyl of 1 to 6 carbon atoms, inclusive, which may be a straight chain or branched;

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wherein  $R_s$  is  $z_i \qquad z_{ii}$ 

 $Z_{v}^{\prime}$ 

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wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

 $Z_{iii}$ 

wherein  $Y_1$  is -OH, methyl, SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or  $CH_aZ_b$  where a+b=3, a=0 to 3, b=0 to 3 and Z is cyano, nitro or a halogen;

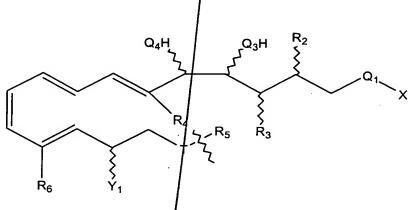
wherein R<sub>6</sub> is

(a) H;

(b) an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched;

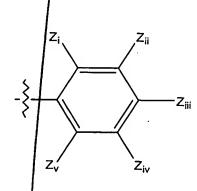
wherein T is O or S, and pharmaceutically acceptable salts thereof; and instructions for using said lipoxin compound for treating a disease or condition associated with PLD initiated activity in the subject.

a container holding a therapeutically effective amount of at least one lipoxin compound having the formula



wherein X is  $R_1$ ,  $OR_1$ , or  $SR_1$ ; wherein  $R_1$  is

- (i) a hydrogen atom;
- (ii) an alkyl of 1 to 8 carbons atoms, inclusive, which may be straight chain or branched;
- (iii) / a cycloalkyl of 3 to 10 carbon atoms;
- (iv) an aralky of 7 to 12 carbon atoms;
- (v) \ phenyl;
- (vi) substituted phenyl



wherein  $Z_i$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to

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8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl;

- (vii) a detectable label molecule; or
- (viii) a straight or branched chain alkenyl of 2 to 8 carbon atoms, inclusive;

wherein  $Q_1$  is (C=0),  $SO_2$  or (CN), provided when  $Q_1$  is CN, then X is absent; wherein  $Q_3$  and  $Q_4$  are each independently O, S or NH; wherein one of  $R_2$  and  $R_3$  is a hydrogen atom and the other is

- (a) H;
- (b) an alkyl of 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched;
- (c) a cycloalkyl of 3 to 6 carbon atoms, inclusive;
- (d) an alkenyl of 2 to 8 carbon atoms, inclusive, which may be straight chain or branched; or
- (e) R<sub>a</sub>Q<sub>2</sub>R<sub>b</sub>, wherein Q<sub>2</sub> is -O- or -S-; wherein R<sub>a</sub> is alkylene of 0 to 6 carbons atoms, inclusive, which may be straight chain or branched and wherein R<sub>b</sub> is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a hydrogen atom;

wherein R<sub>4</sub>

- (a) H;
- (b) an alky of 1 to 6 carbon atoms, inclusive, which may be a straight chain or branched;

wherein R<sub>5</sub> is

wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein  $Y_1$  is -OH, methyl, -SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or CH<sub>a</sub>Z<sub>b</sub> where a+b=3, a=0 to 3, b=0/to 3 and Z is cyano, nitro or a halogen;

wherein R<sub>6</sub> is

(a)

H;

(b)

an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched:

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wherein T is O or S/ and pharmaceutically acceptable salts thereof; and instructions for using said lipoxin compound for treating PLD initiated activity in the subject.

15. A packaged pharmaceutical composition for treating a disease or condition associated with phospholipas D (PLD) initiated superoxide generation or degranulation activity in a subject, comprising:

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a container holding a therapeutically effective amount of at least one lipoxin compound having the formula

wherein X is R<sub>1</sub>, OR<sub>1</sub>, or SR<sub>1</sub>; wherein R<sub>1</sub> is

> (i) a hydrogen atom;

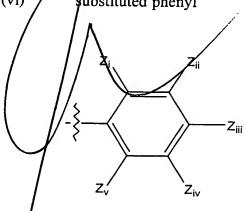
(ii) an alkyl of 1 to 8 carbons atoms, inclusive, which may be straight chain or branched;

(iii) a cycloalkyl of 3 to 10 carbon atoms;

(iv) aralkyl of 7 to 12 carbon atoms;

phenyl; (v)

(vi) substituted phenyl



wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from -NO<sub>2</sub>, -CN,  $-C(=O)-R_1$ ,  $-SO_{\beta}H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl;

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- (vii)
- a detectable label molecule; or
- (viii) a straight or branched chain alkenyl of 2 to 8 carbon atoms, inclusive;

wherein  $Q_1$  is (C=O),  $SO_2$  or (CN), provided when  $Q_1$  is CN, then X is absent; wherein  $Q_3$  and  $Q_4$  are each independently O, S or NH; wherein one of  $R_2$  and  $R_3$  is a hydrogen atom and the other is

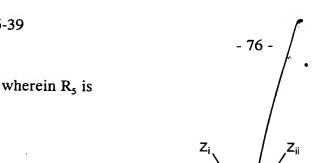
- (a) H;
- (b) an alkyl of 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched;
- (c) a cycloalkyl of 3 to 6 carbon atoms, inclusive;
- (d) an alkenyl of 2 to 8 carbon atoms, inclusive, which may be straight chain or branched; or
- (e)  $R_aQ_2R_b$  wherein  $Q_2$  is -O- or -S-; wherein  $R_a$  is alkylene of 0 to 6 carbons atoms, inclusive, which may be straight chain or branched and wherein  $R_b$  is alkyl of 0 to 8 carbon atoms, inclusive, which may be straight chain or branched, provided when  $R_b$  is 0, then  $R_b$  is a hydrogen atom;

wherein R/ is

- /(a)
- (b) an alkyl of 1 to 6 carbon atoms, inclusive, which may be a straight thain or branched;

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 $Z_{iii}$ 

wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein  $Y_1$  is -OH, methyl, -SH, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or CH<sub>a</sub>Z<sub>b</sub> where a+b=3, a=0 to 3,  $b\neq 0$  to 3 and Z is cyano, nitro or a halogen;

wherein R<sub>6</sub> is

(a) H;

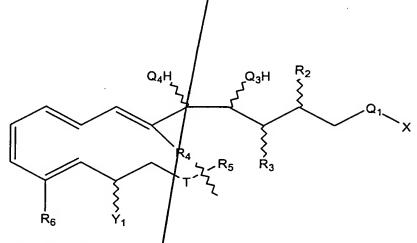
(b) an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched;

wherein T is O pr S/and pharmaceutically acceptable salts thereof; and instructions for using said lipoxin compound for treating a disease or condition associated with PLD initiated superoxide generation or degranulation activity in the subject.

16. A packaged pharmaceutical composition for treating phospholipase D (PLD) initiated superoxide generation or degranulation activity in a subject, comprising:

a container holding a therapeutically effective amount of at least one lipoxin

compound having the formula



wherein X is  $R_1$ ,  $OR_1$ , or  $SR_1$ ;

wherein  $R_1$  is

(i) a hydrogen atom;

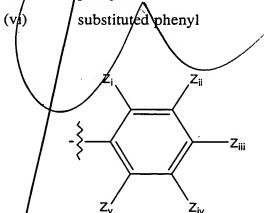
(ii) an alkyl of 1 to 8 carbons atoms, inclusive, which may

be straight chain or branched;

(iii) / a cycloalkyl of 3 to 10 carbon atoms;

(iv) / an aralkyl of 7 to 12 carbon atoms;

v)/ /phenyl;



wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from -NO<sub>2</sub>, -CN,

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 $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl;

- (vii) a detectable label molecule; or
- (viii) a straight or branched chain alkenyl of 2 to 8 carbon atoms, inclusive;

wherein  $Q_1$  is (C=O),  $SO_2$  or (C N), provided when  $Q_1$  is CN, then X is absent; wherein  $Q_3$  and  $Q_4$  are each independently O, S or NH; wherein one of  $R_2$  and  $R_3$  is a hydrogen atom and the other is

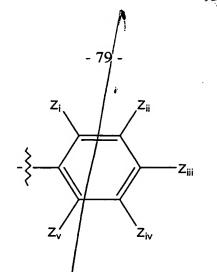
- (a) H;
- (b) an alkyl of 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched;
- (c) a cycloalky of 3 to 6 carbon atoms, inclusive;
- (d) an alkenyl of 2 to 8 carbon atoms, inclusive, which may be straight chain or branched; or
- (e) R<sub>a</sub>Q<sub>2</sub>R<sub>b</sub> wherein Q<sub>2</sub> is -O- or -S-; wherein R<sub>a</sub> is alkylene of 0 to 6 carbons atoms, inclusive, which may be straight chain or branched and wherein R<sub>a</sub> is alkyl of 0 to 8 earbon atoms, inclusive, which may be straight chain or branched, provided when R<sub>b</sub> is 0, then R<sub>b</sub> is a hydrogen atom;

wherein R4 is

- (a) H;
- (b) an akyl of 1 to 6 carbon atoms, inclusive, which may be a straight chain or branched;

wherein R<sub>5</sub> is

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wherein  $Z_i$ ,  $Z_{ii}$ ,  $Z_{iii}$ ,  $Z_{iv}$  and  $Z_v$  are each independently selected from  $-NO_2$ , -CN,  $-C(=O)-R_1$ ,  $-SO_3H$ , a hydrogen atom, halogen, methyl,  $-OR_x$ , wherein  $R_x$  is 1 to 8 carbon atoms, inclusive, which may be a straight chain or branched, and hydroxyl or a substituted or unsubstituted, branched or unbranched alkyl group;

wherein  $Y_1$  is -OH, methyl, -\$H, an alkyl of 2 to 4 carbon atoms, inclusive, straight chain or branched, an alkoxy of 1 to 4 carbon atoms, inclusive, or  $CH_aZ_b$  where a+b=3, a=0 to 3, b=0 to 3 and Z is cyano, nitro or a halogen;

wherein R<sub>6</sub> is

(a) H

(b) an alkyl from 1 to 4 carbon atoms, inclusive, straight chain or branched;

wherein T is O or S, and pharmaceutically acceptable salts thereof; and instructions for using said lipoxin compound for treating PLD initiated superoxide generation or degranulation activity in the subject.

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